

# **NETWORK AND ANCILLARY SERVICES**

## **PUBLIC INFORMATION FORUM**

### **AGENDA**

- Acronyms
- Background
- Network Service
- Six Ancillary Services
  - Scheduling (Schedule 1)
  - Voltage Support (Schedule 2)
  - Regulation (Schedule 3)
  - Energy Imbalance (Schedule 4)
  - Operating Reserves (Schedule 5 & 6)
- Timeline of Activities
- Contacts

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## ACRONYMS

- OATT - Open Access Transmission Tariff
- LRS – Load Ratio Share
- ATRR – Annual Transmission Revenue Requirement
- CP – Coincidental Peak
- BATO - Balancing Authority and Transmission Operations
  - Formerly Control Area
- RR – Revenue Requirement for service

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## BACKGROUND (1 of 2)

- Western's OATT
  - January 6, 1998
  - to comply with FERC 888
- Current – Rate Order No. WAPA- 84
  - effective April 1, 1999 to March 31, 2004
  - Extended to March 31, 2006
- Revised OATT filed January 25, 2005
  - <http://www.wapa.gov/transmission/oatt.htm>
- Proposed – Rate Order WAPA-127

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## BACKGROUND (2 of 2)

- Informal Meeting on June 27, 2005
- Feed back Considered
- DSW Established an External Web site
  - <http://www.wapa.gov/dsw/pwrmt/ANCSRV/ANCSRV.htm>

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## NETWORK SERVICE (1 of 3)

- Network Service is Project Specific
  - PDP and Intertie are offered under this Rate Order
  - CAP is Offered Under a Separate Rate Order
- Whole System Network Service
  - Only if Multi-System Transmission Rate is Approved

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## NETWORK SERVICE (2 of 3)

- Opens transmission systems to more customers
  - Customers charged for metered use
  - Increases available transmission
    - Load Diversity

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## NETWORK SERVICE (3 of 3)

- Charge =  $LRS \times 1/12 \times ATRR$
- $LRS = CP / \text{system peak (by Project)}$
- Monthly peak hour = hour Network customers' loads is greatest
- Rolling 12 month averages
  - 12 CP

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## ANCILLARY SERVICES (1 of 2)

- Supplied from Generation Resources (except Scheduling)
  - Are necessary for transmission service
  - Correct effects of transmission transactions
  - Apply within BATO Area
  - Defined in Western's OATT

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## ANCILLARY SERVICES (2 of 2)

- Scheduling - Scheduling, System Control And Dispatch Service
- Voltage Support - Reactive Supply And Voltage Control Service From Generation Resources
- Regulation - Regulation And Frequency Response Service
- Energy Imbalance Service
- Operating Reserves
  - Spinning Reserve Service
  - Supplemental Reserve Service

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## **SCHEDULING SERVICE**

### **Schedule 1 (1 of 5)**

- Schedule movement of Power
  - Through, out of, within or into BATO
- Must be purchased from Transmission Provider
- Proposed service Included in Transmission Rate

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## **SCHEDULING SERVICE**

### **Schedule 1(2 of 5)**

- Annual costs are Labor and Capital costs
- Based on E-Tag
  - Primary method for communicating Interchange Scheduling Information
  - Relevant information to identify a transaction

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## SCHEDULING SERVICE

### Schedule 1 (3 of 5)

- Steps to determine rate
  - 1) Annual capital costs divided by the number of tags from previous year
  - 2) Determine average labor cost per tag
  - 3) Add to capital cost per tag
- Rate = capital cost for service/# of Tags/yr + labor cost/Tag

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## SCHEDULING SERVICE

### Schedule 1 (4 of 5)

- Capital Cost per Tag = \$14.35



- Labor Cost per Tag = \$4.26



- Cost per Tag = \$18.61

\$

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## **SCHEDULING SERVICE**

### **Schedule 1 (5 of 5)**

- **For Current**
  - Rates based on schedules
  - Four Rates
    - Combinations of new, existing, with intra bus transfers, with no intra bus transfers
- **Proposed Rate**
  - Based on Tags
  - One rate

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## **VOLTAGE SUPPORT**

### **Schedule 2 (1 of 5)**

- **Maintain Voltage levels on System**
- **Injections or Absorption of VARs**
- **Must be purchased from Transmission Provider**

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## VOLTAGE SUPPORT

### Schedule 2 (2 of 5)

- Equipment
  - Static VAR Support
  - Generating units
- Static Costs recovered in transmission rate
- Generation-related costs covered in this proposed rate

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## VOLTAGE SUPPORT

### Schedule 2 (3 of 5)

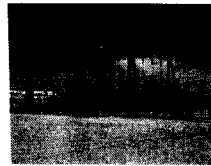
- $\text{Rate} = \text{RR} \div (\text{Capacity Using Service})$
- $\text{RR} = \text{Gen RR} * \% \text{ used for Voltage Support}$
- $\text{RR for service} =$ 
  - $\text{BCP Base Charge} \times (1 - \text{PF}_{\text{BCP}}) +$
  - $\text{PDP Gen RR} \times (1 - \text{PF}_{\text{PDP}}) +$
  - $\text{CRSP Gen RR} \times (1 - \text{PF}_{\text{CRSP}})$
- $\text{Capacity} = \text{DSW Transmission capacity} - \text{capacity of IPPs}$

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## VOLTAGE SUPPORT Schedule 2(4 of 5)

RATE kW-Yr	\$0.52
RATE kW-Mo	\$0.043



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## VOLTAGE SUPPORT Schedule 2 (5 of 5)

- Current
  - Capacity \* (1-PF<sup>2</sup>)
  - CRSP MC calculates capacity
  - all reservations in Control Area
  - Expressed monthly rate to 2 decimal places
- Proposed Methodology
  - Capacity \* (1-PF) – all Projects
  - Used PDP operational flows
  - Capacity Excludes IPPs

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## REGULATION

### Schedule 3 (1 of 8)

- Continuous balancing of resources with load
- Maintain frequency

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## REGULATION

### Schedule 3 (2 of 8)

- AGC and SCADA equipment and generation
- Generation used for regulation
  - Cannot be used for other services
- Frequent changes in output
  - Increased O&M costs
  - Increases wear and tear

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## REGULATION

### Schedule 3 (3 of 8)

- **No long-term sales**
  - *Except as bundled in the FES*
- **Market Price plus procurement cost if requested**
- **Short-term sales from DSW resources if available**
  - *Proposed rate (next slide)*

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## REGULATION

### Schedule 3 (4 of 8)

- **Rate = RR /BATO load requiring the service**
- **RR for service =**
  - *(Capacity for service x Capacity rate of Project + Regulation Purchases) x use factor*
- **BATO load requiring the service =**
  - *CRSP Southern load + DSW load + Additional Load in BATO*

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## REGULATION Schedule 3 (5 of 8)

<b>Regulation Capacity RR</b>	<b>\$918,932</b>
<b>BATO Load Requiring Service</b>	<b>4,483,892 MWhr</b>
<b>Regulation Rate</b>	<b>0.2049 mills/kWhr</b>



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## REGULATION Schedule 3 (6 of 8)

- **Limited capacity estimated for regulation:**
- **Abnormally high load variations**
  - *use additional services*
  - *Example: smelters and arc furnaces*
  - *require additional metering*

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## REGULATION

### Schedule 3 (7 of 8)

- A single plant or site
- Incremental regulation capacity requirement
  - 5 MW or greater on a reoccurring basis; and
  - Capacity requirement equal to 10% or greater of their average load
  - determined by Western
- Provided for in a separate service agreement
- Compensates for the additional burden

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## REGULATION

### Schedule 3 (8 of 8)

- Current
  - Capacity rate of project supplying service
  - Non-standard load not considered
- Proposed Methodology
  - Formula determined RR

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## ENERGY IMBALANCE

### Schedule 4 (1 of 6)

- Difference between scheduled and actual delivery of energy on hourly basis
- Make up imbalance energy deviations
  - scheduled energy or
  - Pay the cost of the imbalance energy
- Energy deviation bandwidth
  - Helps load only customers
  - Different consequences

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## ENERGY IMBALANCE

### Schedule 4 (2 of 6)

- Energy Bandwidth
  - On-Peak = +/- 1.5% with a min. of 5 MW (Over Delivery or Under Delivery)
  - Off-Peak = +1.5% to -3% with a min. of 2 MW (Over Delivery) and 5 MW (Under Delivery)

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## ENERGY IMBALANCE

### Schedule 4 (3 of 6)

- Energy Within the Bandwidth
  - On-Peak = 100% of Weighted Index price
  - Off-Peak = 100% of Weighted Index price
  - Western's determines whether settlement is scheduled return of energy or a monetary settlement

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## ENERGY IMBALANCE

### Schedule 4 (4 of 6)

- Energy Outside the Bandwidth
  - On-Peak
    - 110% of Weighted Index price for Under Deliveries and
    - 90% of Weighted Index price for Over Deliveries
  - Off-Peak
    - Under Deliveries Settlement 110% of Weighted Index price
    - Over Deliveries Settlement Greater of 60% of Weighted Index price or WALC weighted sales price

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## ENERGY IMBALANCE Schedule 4 (5 of 6)

- Rate Order WAPA-84
- FERC pro-forma was used
  - + or - 1.5% bandwidth w/ 2 MW deviation minimum
  - Under-deliveries assessed 100 mills/kWh penalty
  - Over-deliveries credited 50% of market value

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## ENERGY IMBALANCE Schedule 4 (6 of 6)

- Proposed Rate
  - Uses market value of energy for Settlement
  - Treats on-peak differently than off-peak

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## OPERATING RESERVES

### Schedule 5 & 6 (1 of 3)

- Hedge on generation or transmission outages (contingencies)
- Two Schedules:
  - Schedule 5: Spinning Reserves
    - Synchronized to the system
      - serve load at time of event; or
      - Load removable at the time of the contingency
  - Schedule 6: Supplemental Reserves
    - Synchronize to the system within 10 minutes
      - serve load within 30 minutes
      - Load removable within 10 minutes

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## OPERATING RESERVES

### Schedule 5 & 6 (2 of 3)

- Not available on a long-term basis
  - Open market plus cost to procure
- Short-term from DSW Resources if available
  - Priced at Market based rates

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## OPERATING RESERVES

### Schedule 5 & 6 (3 of 3)

- Current
  - Market based rate plus 10%
- Proposed Rate
  - Market based rate plus cost to procure

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## TIMELINE OF ACTIVITIES

<u>Action</u>	<u>Date</u>
<b>Federal Register Notice was Published</b>	<b>10/12/05</b>
<b>Beginning of the Comment Period</b>	<b>10/12/05</b>
<b>Public Information Forum (PIF)</b>	<b>11/02/05</b>
<b>Public Comment Forum</b>	<b>11/29/05</b>
<b>PIF Response Letter Send to Customers</b>	<b>12/20/05</b>
<b>Close of Comment Period</b>	<b>1/10/06</b>
<b>Effective Date of the Rate</b>	<b>4/1/06</b>

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